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GEORGIA

TUBERCULOSIS
PREVENTION
PROJECT



Final Report

2011-2016

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**TUBERCULOSIS
PREVENTION
PROJECT**

Final Report

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ACRONYMS

ACSM	Advocacy, Communications, and Social Mobilization	MDG	Millennium Development Goals
AFB	Acid-fast Bacilli	MDR TB	Multidrug-resistant Tuberculosis
AIDS	Acquired Immune Deficiency Syndrome	M&E	Monitoring and Evaluation
BCC	Behavior Change Communication	MoE	Ministry of Education
CCM	Country Coordinating Mechanism	MoLHSA	Ministry of Labour, Health and Social Affairs of Georgia
CDR	Case Detection Rate	MoCLA	Ministry of Corrections and Legal Assistance of Georgia
CME	Continuing Medical Education	MoU	Memorandum of Understanding
CPD	Continuous Professional Development	NCDCPH	National Center of Disease Control and Public Health
CPF	Continuous Professional Feedback	NCTLD	National Center for Tuberculosis and Lung Disease
DOTS	Directly Observed Treatment Short-course Strategy	NTP	National Tuberculosis Program
DR TB	Drug Resistant Tuberculosis	OR	Operational Research
DST	Drug Sensitivity Testing	PCP	Primary Care Provider
e-HMIS	e-Health Management Information System	PHC	Primary Health Care
FM	Family Medicine	PMP	Performance Monitoring Plan
FP	Family Physicians	PPM	Public Private Mix
GFATM	Global Fund to Fight AIDS, TB, and Malaria	PR	Principal Recipient
GFMA	Georgia Family Medicine Association	PSA	Public Service Announcement
GF	Global Fund	QI	Quality Improvement
GPN	General Practice Nurse	TB	Tuberculosis
GLC	Green Light Committee	TPP	Tuberculosis Prevention Project
GOG	Government of Georgia	TSMU	Tbilisi State Medical University
GP	General Practitioner	TSR	Treatment Success Rate
GSC	Grants Selection Committee	URC	University Research Co., LLC
HIV	Human immunodeficiency virus	USAID	United States Agency for International Development
HSSP	Health Systems Strengthening Project	USG	United States Government
HR	Human Resources	VCT	Voluntary Counseling and Testing
IC	Infection Control	WONCA	World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians
IUATLD	International Union against Tuberculosis and Lung Disease	XDR TB	Extensively Drug-Resistant Tuberculosis
KAP	Knowledge, Attitudes, and Practices		
MCQ	Multiple Choice Questionnaire		

EXECUTIVE SUMMARY

With support from the US Agency for International Development (USAID), University Research Co., LLC (URC) has implemented the Georgia TB Prevention Project (TPP), a five-year project working with the National Tuberculosis Program (NTP) to strengthen active case finding and improve the quality of TB directly observed treatment, short course (DOTS) and MDR-TB services. The Tuberculosis Prevention Project has acted as a mechanism to adapt and integrate successful, cost effective tools and approaches which have achieved a measurable impact, and has also helped in integrating these at community, facility and national levels.

The project has made a significant contribution towards strengthening the policy and regulatory environment for adequate TB control, and has supported programmatic management through the use of innovative technologies such as electronic health management information and mHealth systems. Major achievements include:

Capacity Building of Primary Care Providers for Early TB Detection

1,277 family physicians and 1,298 general practice nurses (approximately 60% of all primary care providers in the country) participated in a two-day training program on early detection of Tuberculosis. Capacity building efforts aimed at primary care providers resulted in an increase in the proportion of people referred from primary health care (PHC) to TB services for diagnostic workup. In 2012, 589 individuals out of 15,240 (4%) with presumptive TB were referred by PHC providers. By 2015, PHC providers had referred 2902 individuals out of 17,824 presumptive TB cases (16%).

Strengthening Regulatory Framework for Sustainable TB Response

Technical support provided to the Parliamentary Committee for Health and Social issues led to adoption of a comprehensive TB control law to ensure sustainability in access and quality of TB services and provide social assistance to people with TB to support treatment adherence.

Strengthening NTP Management Capacity

A new eTB health management information module was introduced and implementation supported. As a result, since May 2015 (when the GoG issued a decree mandating electronic TB reporting), 80% of TB care providers have started entering the data into the module on a regular basis. The module allows for tracking TB data in real time, thus can facilitate problem identification and timely decision making.

Improving Quality of TB Services

Significant contribution was made in improving quality of TB services through introducing up-to-date TB management guidelines, supporting implementation of new TB drugs (e.g. Bedaquiline) and schemes for effective M/XDR TB management.

Strengthening Capacity of Civil Society Organizations (CSOs)

Eighteen small grants programs were implemented by local civil society organizations to improve demand for and quality of TB services. This created a strong foundation for future engagement of CSOs in national TB response.

Building Integrated TB Service Delivery Model

TPP has continuously supported integration of TB services into the primary care and general hospital settings. Interventions included capacity building, on-site mentoring, strengthening infectious controls mechanisms and improving infrastructure to achieve an adequate air-flow.

Supporting Evidence-based Planning

TPP team has been actively involved and facilitated national consultations aimed at developing TB national strategies for 2013-2015 and 2016-2020, and also assisted in organizing the country dialogue aimed at preparing the country concept note within the Global Fund new funding mechanism. The concept note was endorsed by the Global Fund Grant Approvals Committee (GAC) in October 2015.

Improving TB-related Knowledge and Reducing a Level of Stigma

Active advocacy, communication and social mobilization activities resulted in significant improvements in TB-related knowledge, attitude and practices among general public, health care workers and TB patients. The follow up TB Knowledge, Attitude and Practices (KAP) survey conducted in 2015 showed statistically significant improvement in TB-related knowledge in the general public, among current and former TB patients, and health care workers in general healthcare settings.

Strengthening TB Laboratory Services

TPP contributed to strengthening TB laboratory services. Support was provided in implementation of GeneXpert technologies at NCDC laboratory network. Two GeneXpert machines were purchased and installed at general hospitals to improve infection control practices to avoid nosocomial transmission and build public-private partnership for TB control.



Youth participated in community awareness activities in the Samegrelo region

TPP achievements and lessons learned have tremendous importance for creating strong foundations for meeting the post 2015 TB strategy goals. Georgia has achieved significant progress in the fight against tuberculosis for the last decade. However, the increasing proportion of MDR TB cases and still low treatment success rate of MDR TB require further intensified efforts for effective National TB Response. It is critical to ensure universal access to prevention, diagnosis and treatment of all form of tuberculosis and support effective integration of TB control interventions within the overall health system framework

BACKGROUND

University Research Company, LLC, (URC) is a global company dedicated to improving the quality of health care, social services, and health education worldwide.

With our non-profit affiliate, the Center for Human Services (CHS), URC manages projects in over 45 countries, including the United States.

In many of the 22 countries that account for more than 80% of the world's tuberculosis (TB) cases, URC implements evidence-based solutions to help health systems diagnose, treat, and prevent all forms of TB, including drug-resistant and multidrug-resistant strains, and uses rapid quality-improvement cycles and continuous monitoring and evaluation to strengthen health systems and improve the quality of care for all.

Our areas of expertise include TB prevention and control, community-based care and DOTS, programmatic management of multidrug-resistant TB, TB systems strengthening, connected health solutions, eHealth and mobile money solutions, laboratory strengthening, and TB-HIV coordinated care. We partner with ministries of health, national TB control programs, national reference laboratories, academic institutions, the private sector, and community and civil society institutions to ensure our work is locally supported and sustainable. Our commitment is reflected in impressive results under programs such as the TB Prevention Project in Georgia, which is emerging as a leader in the use of new drugs for multidrug-resistant TB.

URC established its office in Georgia in 2011 to implement the USAID Georgia Tuberculosis Prevention Program (TPP). This project has demonstrated that significant progress can be

*The Tuberculosis Prevention Program project has demonstrated that **significant progress can be achieved in the fight against TB** through building an integrated TB care model.*

achieved in the fight against TB through building an integrated TB care model. Our key focus has been improving the quality of TB services and health systems strengthening for better case detection, timely referral, accurate diagnosis, adequate treatment and social support. The Tuberculosis Prevention Project (TPP) team is delighted with the opportunity to share challenges and lessons learned of complex transition from a purely vertical, state-owned and state-funded TB service delivery model toward an integrated general health system with greater involvement of private health facilities. The TPP contribution helped the National TB Program to build strong foundations for sustainability of TB control interventions. TPP's achievements can successfully propel the country towards 2030's Sustainable Development Goals and assist in meeting the EU-Georgia Association Agreement requirements that has tremendous importance for country's social, political and economic prosperity.



To mark World TB Day, TPP team visited a pediatric department and arranged a drawing session for children with TB.

KEY ACHIEVEMENTS

Purpose, Objectives, and Expected Results of TB Prevention Project

TPP has been designed to address the challenges of rapid reforms and contribute to achieving the overall USAID/Georgia and Government of Georgia's objective to reduce the number of all TB cases in the country and thus, facilitate achievement of its Millennium Development Goals (MDGs). The project goals have been achieved through the following three objectives:

Objective 1. Improving early detection of TB suspected cases in general health facilities: The main objective of USAID/Georgia TPP has been to improve early detection of presumptive TB cases in general and PHC facilities by strengthening capacity of health providers in TB management. This has been achieved through training interventions which were designed to ensure that front-line health workers can identify TB cases in a timely manner and correctly manage TB cases within scope of their competencies.

Objective 2. Strengthening the quality of full implementation of Directly Observed Treatment Short-course Strategy (DOTS) and DOTS plus nationwide: TPP has been strengthening the full implementation of DOTS and DOTS plus nationwide to ensure that providers routinely adhere to effective, standardized treatment guidelines, as a means to improve treatment outcomes and reduce drug resistance. The project used training, technical assistance, and continuous performance feedback to enhance the capacity of health care workers, and also developed health workers' capacity to support patients through treatment completion. In addition to provider capacity, the project addressed health sector issues related to supporting quality DOTS at private provider networks recently engaged in TB service delivery. TPP has expanded partnerships with

communities and non-government organizations (NGOs) to support delivery of TB services.

Objective 3. Providing limited assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB best practice standards, and to improve infection control: TPP has provided support to private health clinics engaged in TB service delivery since 2012. Ventilation systems were installed at 30 clinics and infection control practices supported through introducing protocols and training staff members.

All project activities and priorities have been developed and implemented with significant input from local stakeholders. Concerted action of all stakeholders became a pre-requisite for ensuring a smooth transition from a vertical system and to promote quality TB service delivery within the integrated model of care.

Changing the Health Care Landscape: The Context for TPP Implementation

TPP has been implemented in a rapidly changing health care landscape.

Reforms Towards Integrated Service Delivery Model

Early 2012 was marked with the decision of the Government to integrate TB clinics into the private general health facilities. A truly functional integration of TB services into the private network, if successful, should lead to improvements in the early detection of TB cases, referral and regularity of patient follow-up, and most importantly, in quality of treatment. At the

same time, there are potential pitfalls that need to be addressed in order to achieve success, including reinforcing infection control measures and bringing the physical infrastructure for TB services up to internationally acceptable standards relating to space and air flow. Various assessments and situation analyses conducted collaboratively by the Ministry of Labour, Health and Social Affairs (MOLHSA)/NTP and TPP team in Years 1 and 2 have revealed that private facilities and TB teams were requiring substantial support to adequately meet needs of TB patients.

The following were challenges on the way to integration that warranted immediate attention:

1. Physical infrastructure of TB services should be brought up to acceptable standards including space and air flow requirements.
2. Infection control (IC) measures should be reinforced in health centers where TB patients receive diagnostic or any other services.
3. Emergence of new players with varying levels of experience in TB service provision made the introduction of effective quality assurance tools an imperative.
4. The integrated system required training of providers from every level of the health system. Competencies of each professional involved in TB care have to be clearly defined and capacity building planned accordingly.
5. Privatization had some impact on TB medicines supply, storage, and distribution practices. National consultations were held to help private providers in defining optimal ways for TB drug supply and storage.
6. Private entities needed support to meet TB reporting and recording requirements established within NTP.
7. In the integrated system there was a clear need to understand drivers for stigma and to develop advocacy, communications, and social mobilization (ACSM) materials to address TB-related stigma in specific communities and population groups.

TPP has facilitated a series of national consultations to find a common solution to the above listed problems and plan the National TB Response in line with emerging priorities.

Universal Health Care Program and Reform Priorities

The universal health care program launched in 2013 fully eliminated financial access as a barrier to primary care services. Universal access to health services opened up new opportunities for developing an integrated model for TB service delivery. In the governmental resolution "Georgia 2020", the GoG stressed the importance of strengthening primary care services that can significantly improve early detection of TB cases. Another policy document adopted in December 2014 was the Georgia Health Care Concept for 2014-2020, called "Universal Health Care and Quality Assurance for protecting patients' rights."

This policy document recognized TB and M/XDR TB as major public health challenges and call for the following actions for adequate TB control:

- ◆ Strengthening leadership and governance for a well-coordinated multi-sectoral response to TB, HIV and hepatitis C.
- ◆ Introducing electronic health management information systems in various areas including the TB program.
- ◆ Achieving sustainable financing of priority health interventions, and from 2016, starting a gradual transition from international funding (Global Fund, GAVI, USAID) to state funding of priority programs (immunization, HIV/AIDS, TB).
- ◆ Improving prevention and management of priority infectious diseases. In order to reduce the burden of HIV/TB co-infection, HIV testing in TB patients and routine detection and treatment of latent TB among HIV infected will continue.
- ◆ Supporting intensified efforts for early identification of presumptive TB cases. This will be achieved through integration of TB services in general hospitals, strengthening

of National Center for Disease Control and Public Health (NCDCPH) epidemiological services and screening and DOT programs in the penitentiary system.

- ◆ Introducing new diagnostic technologies for quick and accurate TB diagnosis
- ◆ Strengthening quality assurance and control mechanisms in TB laboratory networks.

TPP has been represented at high-level national working groups on priority reform directions. TPP has provided substantial input in facilitating country dialogue around primary health care reform options and developing the post 2015 National TB Strategy.

Improving Early Detection of TB Presumptive Cases in General Health Facilities

WHO considers TB control and Primary Health Care as interdependent domains. Rapid progress in controlling TB will not occur in countries where TB is widespread unless TB control is integrated into the PHC system. Similarly, a PHC program cannot be considered adequate unless it includes participation in TB control. Therefore, post-graduate training of family practitioners (FPs) in Georgia that follows the educational agenda of the European Academy of Teachers in General Practice and Family Medicine (EURACT) affirms that general practitioners and FPs are primarily responsible for the provision of comprehensive and continuing care to every individual seeking medical care irrespective of age, sex and illness. Thus engagement of primary care providers is a critical strategy for improving detection and care of TB.

The TPP was designed to encourage greater involvement of family physicians and nurses in TB management to more quickly identify TB cases, support treatment, and achieve successful outcomes. More than 90% of Georgian citizens can access primary care providers within 20 to 30 minutes while TB specialists are only available at district levels that are not easily reachable by those living in remote areas. Strengthening PHC capacity for TB

EARLY DETECTION

- ◆ TPP trained 2,575 FPs and nurses meaning 60% of all PHC providers countrywide and 90% coverage in rural areas.
- ◆ On-the-job performance review and mentoring was provided to 842 physicians and 821 nurses across the country.
- ◆ The proportion of patients with presumptive TB referred by trained family physicians to TB service sites for diagnosis has increased from 4% in 2012 to 16% in 2015.

detection and treatment supervision is a significant step towards improving access to and quality of TB services.

Since 2012, the USAID TB Prevention Project, in close collaboration with the Georgia Family Medicine Association (GFMA), implemented various educational interventions to build PHC providers capacity in TB detection and follow-up care. The project provided a two-day training course in TB detection and management at the primary care level to 90% of rural family physicians and nurses countrywide. Real case scenarios were collected and compiled into the case discussion bulletins issued quarterly to facilitate critical thinking and develop decision making skills. These classroom based knowledge sessions were complemented by on-site performance appraisal visits to observe changes in TB-related practice and provide mentoring to fill gaps in practice. In addition, for the first time ever in Georgia, a 90-minute online training course was developed to encourage self-study by private providers. The training module can be accessed at <http://www.tbonline.ge/>.

Training resulted in improved ability to recognize TB signs and symptoms at an early stage among PHC providers. The proportion of patients with presumptive TB referred by trained FPs to TB service sites for diagnosis has increased from 4% in 2012 to 16% in 2015. One of the important outputs of this training was adjusting the time and place



Students conducted a street walk in honor of World TB Day 2013 to bring awareness to the public about the importance of TB screening and treatment.

for providing treatment under direct observation (DOT) to take into consideration patients' needs and expectations. Performance appraisals revealed positive changes in providers' communication skills, including TB-related counseling. Moreover, it revealed that interactive and solution-oriented trainings improve providers' performance in TB management by promoting positive attitudes, encouraging creative problem solving and building self-confidence and responsibility.

In 2013, TPP initiated an annual conference called "Strengthening the PHC Role in TB Identification and Management," devoted to presentation of the performance appraisal results and the "best TB team" and "best PHC team" awards. The annual awards event was established to recognize outstanding achievement, foster high professional standards, develop leadership and encourage creative work among professionals working in the challenging field of TB

control. The annual recipients of the award are physicians and nurses who have gone above and beyond in their role and serve as a model of professionalism with caring and respect for the TB patients. Candidates for the award, who are nominated by TPP Regional Coordinators and selected by core staff of TPP, possess knowledge, ability, understanding, and the sincere desire to provide the best possible medical care within their facilities and communities.

Each year the conference was attended by representatives of the Georgia Family Medicine Association, Georgian Phthysiologists and Pulmonologists Association, the National Center for Disease Control and Public Health, and NGOs including the newly established Georgia Patients' Union, in a show of inter-sectoral collaboration and patient engagement. TB specialists and nurses as well as PHC teams from different regions were selected and recognized for their outstanding work.

IMPROVING EARLY DETECTION OF TB PRESUMPTIVE CASES IN GENERAL HEALTH FACILITIES

1,277 family physicians and **1,298** general practice nurses employed in Tbilisi, Ajara, Samegrelo-ZemoSvaneti, Imereti, Kakheti, Guria, Kvemo Kartli, Shida Kartli, Samtskhe-Javakheti and Mtskheta-Mtianeti regions trained in TB prevention, early detection, referral and long-term community based care

100 TB and HIV physicians were trained in detection, prevention and management of TB/HIV co-infection

100 TB physicians trained in usage of new algorithms for rapid diagnosis of TB by Xpert MTB/RIF System

153 epidemiologists of National Center for Disease Control and Public Health (NCDC) trained in tracing of TB Contacts, Ex-prisoners and Defaulters

196 pediatricians trained in pediatric TB diagnosis and management

11 communication campaigns implemented to mark World TB day and improve awareness regarding childhood TB

86,394 presumptive TB cases and contacts of TB patients received improved screening services

More than **16,000** TB patients were detected and enrolled in treatment, including **2,160** MDR-TB cases

Georgian Artists joined the global End TB movement and donated the original art work to the Georgian TB caucus to express the “Unite to End TB” theme



The TPP implementation experience showed that capacity of primary care providers in TB management can effectively be built through various learning initiatives. Results can be maximized if traditional training sessions are coupled with modern approaches such as real case discussions and availability of online resources created in the local language. All primary care providers need to have unlimited access to internet-based resources to ensure continual updating of acquired knowledge.

Social and Behavior Change Initiatives to Improve TB Detection and Treatment Adherence in Georgia

The USAID Georgia TB Prevention Project has been supporting implementation of population-based social and behavior change

communication (SBCC) campaigns in Georgia aimed at improving TB-related health seeking and treatment adherence behaviors since 2012. The campaign was largely informed by the Knowledge, Attitude and Practices survey conducted at startup. Groups targeted by the informational and educational interventions included current and former TB patients, students and schoolteachers, and front line health care providers. The project used most popular TV channels and specifically designed printed materials for disseminating information on TB symptoms and available diagnostic and treatment services. Front line providers of different specialties (including internists, pediatricians, and endocrinologists) received formal training to build their knowledge on TB diagnosis and enhance positive changes in TB detection practices.

TPP, in collaboration with MoLHSA, NCDC, NCTBLD and local CSOs, conducted annual World TB Day campaigns to raise awareness about the global epidemic of TB and the efforts to eliminate the disease in Georgia as well as to call for continued efforts to find, treat and cure all people with TB and accelerate the progress towards eradicating TB. The high level meetings were organized annually to highlight progress and challenges of the National TB Program and outline steps to be taken towards the Stop TB Strategy and post-2015 agenda to meet the End TB Strategy targets. The TPP has facilitates a number of wide public campaigns to mark the World TB Day and fight TB-related stigma. These included campaigns in prisons with participation of Georgian celebrities and famous writers who expressed their positive attitude and good will to support people with TB and their families. The 2016 World TB Day campaign was special, as it was the first time the high level meeting on TB was held at the Parliament of Georgia, indicating the high level political commitment by the GoG. The Parliament of Georgia became a signatory to the Barcelona Declaration on Tuberculosis, which called for countries to unite against TB since the inaugural global TB summit in 2014. On March 24, 2016, the Parliament announced the launch of the Georgian Caucus for TB - the first national TB Caucus in Europe.

The effectiveness of SBCC interventions was measured through two consecutive KAP surveys in 2012 and 2015. The surveys showed that SBCC interventions resulted in statistically

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დროული და სწორი მკურნალობისას ტუბერკულოზი განკურნებადი!

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A sample of information, education, and communications materials that target current and former TB patients, students and schoolteachers, and front line health care providers. These materials were designed to address gaps identified by the Knowledge, Attitude, and Practices survey

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მეთოდური სახელმძღვანელო

TB

გამოავლინე 3 მილიონი

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QUALITY IMPROVEMENT COLLABORATIVES

- ◆ TPP served as a change agent to spur the adoption of quality improvement methods and promote evidence-based practice.
- ◆ Quality improvement collaborative sessions attended by family physicians, TB specialists, nurses, managers, and public health officials were conducted in all regions of Georgia. The sessions covered MyFamilyClinic, GeoHospitals, Medical Park, Medalfa and Archimedes network facilities where almost 90% of TB service delivery points are operational.
- ◆ Clinical audits were conducted in 30 TB outpatient facilities (40% of all outpatient TB service providers) to measure progress in quality of TB services.

significant improvement in TB-related knowledge and reduction in stigma among TB patients, the general public, and health care providers. These changes stimulated positive health seeking behavior among patients and improved referral practice among provider and patients with TB presumptive symptoms. The number of individuals tested for TB has increased by 18% since 2012. The self-treatment rate has significantly decreased: only 6.6% of study participants reported self-treatment compared to 28.3% from a previous study in 2012. Disappointingly, the SBCC interventions did not improve adherence behavior.

SBCC activities have the potential to improve TB-related knowledge, attitudes, and stimulate behavior change among the general public, health care workers, and TB patients. However, improving knowledge and developing positive attitudes alone cannot lead to significant behavior changes unless there are other motivators and enablers in place for both health care providers and patients.

Strengthening the Quality of Full Implementation of DOTS and DOTS Plus in Georgia

Strengthening the quality of implementation of DOTS and DOTS plus countrywide has been a top priority for the TPP team. Quality improvement interventions aimed at improving process and TB care outcomes were implemented in close collaboration with the national partners including NCDC, NCTBLD, GPPA and private service providers. TPP used the “quality improvement collaboratives” approach to build internal quality improvement systems at a facility level. Assistance was provided to GPPA and NCTBLD in elaborating and introducing new evidence-based TB management guideline for all age groups including children.

Establishing and Promoting Quality Improvement Collaboratives

TPP used a collaborative approach for rapid spread of improvements in health services, contributing to improvements in quality of full implementation of DOTS and DOTS plus nationwide. URC has successfully used this model in several TB and other health projects in many countries around the world. In Georgia, as part of a collaborative, a large number of health facilities were brought together at the regional level to solve TB problems and to achieve significant results. The Quality Improvement Collaborative (QIC) model involved a series of meetings to learn about best practices in the area chosen, to discuss quality methods and change ideas, and to share their experiences of enacting changes in their local settings. The package of interventions—covering providers, patients and the delivery system—were implemented for a period of time. Each facility chose an area of focus that it considered to be affecting its program outcomes. Meetings were held at least once a quarter to review progress and identify other strategies to improve case detection and cure rates. The snow-ball effect was created as a result of knowledge sharing among these facilities. This allowed for the expansion of improvements to other clinical and support areas or other districts requesting to participate in

the program. TPP developed a framework to assist individual TB care providers in conducting situation analysis, identifying possible causes of existing problems, selecting priorities for action and developing an action plan at facility level.

When adapted to the realities of resource-constrained settings the QIC approach has demonstrated its power to achieve rapid results and enable the large-scale spread of evidence-based care models.

Facilitating Development of an Enabling Environment for Effective Service Delivery

The TPP worked closely with MoLHSA, private hospitals, outpatient clinic networks, and Family Medicine and TB specialists' professional associations to ensure a smooth transition from a vertical, purely state funded and implemented TB service delivery model to the new integrated model with an increasing role of private stakeholders. The TPP launch in 2011 coincided with rapid and complex transitions within the National TB Program. The TPP team positioned itself as a resource partner to connect the MoLHSA, state and private institutions and local community-based NGOs. The project played a significant role in building effective partnerships between state and non-state actors involved in the National TB Program and facilitated complex institutional and systemic changes by providing technical advice for developing effective policies and systems for adequate TB control.

The TPP team has established good working relationships with five private health service provider networks (with more than 50 TB service points out of 75 existing across the country) to assist them in addressing challenges of TB service delivery in general health care settings. The technical areas addressed throughout this collaboration included infrastructure adjustment to meet infection control standards; investments for improving ventilation systems to avoid nosocomial transmission of TB; encouraging team building and

The TPP team has established good working relationships with 5 private health service provider networks to assist them in addressing challenges of TB service delivery in general health care settings.

strengthening referrals between TB specialists and primary care doctors; and introducing quality improvement tools for regular evaluation of quality of TB services.

Based on multiple situational analyses, on-site assessments, performance review visits, surveys and focused operational research, TPP has accumulated sound evidence on challenges and opportunities for developing an integrated TB care model in Georgia. This evidence has served as the decision making platform for MoLHSA and the National TB Coordination Council for strategic and programmatic planning for the last 4 years.

Strengthening Multidrug-resistant (MDR) TB Case Management

Developing and Updating Evidence-based Guidelines

To improve content of care, the TPP team developed several clinical practice guidelines and protocols on TB diagnosis and management. The guideline development process was guided by sound methodology offered by MoLHSA in partnership with the National Institute for Health and Clinical Excellence of Great Britain. The guidelines and protocols were developed by the multidisciplinary team, widely consulted by practicing physicians

and nurses and reviewed by local and international experts. The guideline and corresponding clinical protocols were submitted to the Guideline Accreditation Board, MoLHSA and approved by ministerial orders.

TPP supported the development of a TB management guideline in 2012. This guideline was revised and updated in 2015 based on the Companion handbook to the WHO guidelines for the programmatic management of drug-resistant tuberculosis. The updated version included guidance on the use of new drugs for M/XDR TB Belaquiline (SIRTURO) and Delamanide.

Considering the importance of pediatric TB and lack of evidence-based guidance on its management, the TPP team led a joint process to define and develop the first national pediatric TB care guideline. The guideline aims to establish standards for high-quality treatment of tuberculosis in children by providing evidence-based recommendations while considering the risks and benefits, acceptability, and feasibility. Following the WHO recommendation, the principal consideration was that the treatment of childhood tuberculosis is a public health intervention aimed at securing the greatest likelihood of survival and quality of life for the greatest numbers of children with tuberculosis. The guideline package includes the patient version of "What should the parents know about child tuberculosis?" By presenting information in an easily understandable way for patients, it challenges the traditional asymmetry of information between professionals and patients.

Capacity Building of TB Specialists

TPP has made a substantial effort to build capacity of TB specialists to enable them to effectively diagnose and treat patients through patient-centered and evidence-based approaches. A wide array of competencies were covered through one and two-day training programs to improve knowledge and develop skills in MDR TB

treatment, side-effects management, active monitoring of adverse drug reactions, management of childhood tuberculosis, and TB-related reporting and recording. Training programs targeted TB physicians and nurses, laboratory specialists, epidemiologists responsible for TB surveillance and contact tracing. The table presents training courses and target groups covered throughout the TPP implementation period.

In order to support professional development of TB specialists through disseminating evidence-based information and providing opportunities for professional discussions and experience sharing, the TPP technical

TRAINING COURSES ON TB DIAGNOSIS AND MANAGEMENT		
Training course	Target group	Coverage
New TB Definitions and Recording-Reporting System	226 TB Physicians	100%
Introduction of New TB Drugs for DR-TB Treatment	63 TB Physicians	28% but all involved in MDR TB treatment
Active Monitoring and Management of Adverse Events in Patients with Drug-Resistant TB (TOT)	10 TB Physicians	4%
Use of Xpert MTB/RIF System for Rapid Diagnosis of Tuberculosis and Rifampicin Resistance	100 TB Physicians	44%
Management of Pediatric TB Cases	26 TB Physicians–Pediatricians	95%
Detection and Management of Mental Disorders Among Patients on TB treatment	179 TB specialists (126 TB Physicians and 53 TB Nurses)	56% of physicians and 26% of nurses
Collaborative TB/HIV Activities—Countrywide Implementation of "3Is" Strategy	100 TB and HIV Physicians	30%
TB Epid surveillance and contact tracing	156 epidemiologists	100%

team worked with the Association of TB and Lung Specialists to develop the annual agenda for regular professional meetings. This partnership ensured that the meetings were focused on and reflect the most important and challenging technical areas of the National TB Care program.

TPP supported a series of professional meetings and arranged conferences. Professional meetings were devoted to TB palliative care knowledge and experience, MDR TB–international experience, discussion of materials from the 43rd Union World Conference on Lung Health session on “driving sustainability through mutual responsibility,” pediatric TB, risk factors associated with TB treatment default among M/XDR TB patients and NGO experience in the TB prevention Field. The conferences covered performance appraisals of PHC providers and TB guidelines. Meetings facilitated information sharing and active discussions, thus increasing visibility and interest in the lessons learned.

Support Introduction of the New M/XDR TB Treatment Schemes

Georgia is among the first recipient countries to receive bedaquiline through the USAID and Janssen Therapeutics' Bedaquiline Donation Program to help treat MDR-TB. The overall purpose of the donation program is to assist the Government of Georgia in combating MDR-TB, and to ensure access to the drug for all patients in need.

The TPP team, in collaboration with national and international partners (USAID/MSH SIAPS, MSF France), supported the country in meeting all the prerequisites for introduction of the new drug to ensure adherence to best practices in treatment delivery, and enable optimal drug effectiveness and safety. A Bedaquiline implementation plan was developed, TB treatment guidelines were updated and TB specialists were trained. Georgia is emerging as a model country for the use of new drugs and has a well-trained workforce that can help provide training and share experiences with other countries in the region and at an international level.



Ambassador Kelly hands over the first shipment of bedaquiline for TB patients in Georgia to Zaza Avaliani, the Director of the National Center for TB and Lung Diseases

Promote an Appropriate National TB Policy and Program Response within the Context of Health Reform

TPP has been cooperating with the MOLHSA/NCDC/NTP staff on a daily basis since the beginning of the project. The daily cooperation created a very favorable environment for sharing technical experience and skills and had been mutually beneficial.

TPP has been promoting evidence-based planning by generating evidence to inform programmatic and policy decision making. Four operational studies were implemented to explore barriers to integration of TB services into the general health care system, to identify risks and enablers influencing TB treatment adherence behavior, and to assess TB-related knowledge, skills and practices. These surveys and situation analysis reports served as a basis for discussions during programmatic and strategic planning.

In 2012, TPP facilitated the development of the National TB Control Strategy for 2013-2015. This strategy aimed to guide stakeholders through the complex transition related to integration of TB services into the broader health care system. In 2015, the Country Coordinating Mechanism for TB, HIV and Malaria initiated the new strategy development cycle to ensure alignment of the National TB control strategy to the post 2015 strategy objectives and targets. The TPP provided technical assistance to the TB stakeholder working group established under the auspices of CCM and facilitated the country dialogue for revising the TB National Strategy and developing the concept note in close collaboration with the USAID long term technical advisor based at NCDCPH. WHO experts who evaluated the new 2015-2020 strategy and Technical Review Panel (TRP) found the submitted concept note to be technically sound and strategically focused. The Global Fund Grant Approvals Committee (GAC) has endorsed the recommendations of the TRP to proceed to grant-making.

Strengthening Laboratory Services

TPP provided technical assistance to NCDC in developing the TB laboratory network strengthening plan from 2015-2020. The plan addresses all major aspects of TB laboratory services including quality, laboratory norms and standards, turnaround times, selection of patients and algorithms, bio-safety, deployment of new technology, specimen transport, EQA, human resources, supervision, information systems, reagents and consumables, and equipment maintenance. The plan was incorporated into the National TB Control Strategy for 2015–2020. It largely informed development of the relevant sections of the Global Fund Concept note developed in 2015.

The TPP provided significant input to national efforts on the introduction of rapid TB diagnostic technologies in the country. In line with WHO recommendations on the

use of Xpert MTB/RIF—an automated nucleic amplification assay for the simultaneous detection of TB and rifampicin resistance directly from sputum in under two hours—Georgia initiated use of this technology. The initiative has been jointly supported by the Global Fund TB project and USAID TPP. The Global Fund TB project has purchased nine GeneXpert machines, while TPP supported installation of Xpert MTB/RIF systems and training of laboratory technicians on use of rapid testing to improve quality of TB diagnosis and ensure timely initiation of adequate treatment for all confirmed TB cases.

From February 7–March 11, 2015, 9 Xpert MTB/RIF Systems were installed and 16 laboratory technicians were trained in seven NCDC laboratories (Gori, Akhaltsikhe, Telavi, Batumi, Ozurgeti, Poti, Zugdidi) and in two laboratories of the penitentiary system.

According to the FIND GeneXpert Implementation Road Map, initial installation and training should be followed by competency assessment of laboratory staff. In November and December 2015, USAID/TPP conducted follow-up trainings for all technicians involved in TB diagnosis at laboratories of NCDC and the penitentiary System. In total, 21 lab technicians were trained. The site visits confirmed that the installed Xpert MTB/RIF systems are fully functional and lab technicians could demonstrate relevant skills.

TRAINING COURSES FOR TB LABORATORY TECHNICIANS		
Training course	Target group	Coverage
Fluorescent Light-Emitting Diode (LED) Microscopy for diagnosis of Tuberculosis	4 Laboratory Technicians from NRL trained in Baku	100% of all technicians with this responsibility
Installation of Xpert MTB/RIF Systems and Training of Laboratory Technicians	21 Laboratory Technicians from all TB labs trained at NRL	100% of NCDC laboratory staff
Bacterioscopy, Culture and Xpert MTB/RIF Testing for TB diagnosis	5 Laboratory Technicians from selected TB labs trained at NRL	In response to NCDC request to address the staff shortage

*TPP provided significant input
to national efforts on the
introduction of rapid TB diagnostic
technologies in Georgia.*

TPP supported capacity building of laboratory specialists in other areas such as TB microscopy, LED microscopy, and TB culture and second line drug susceptibility testing.

Support Dissemination of Capacity Building, Quality Improvement and Educational Interventions in the Penitentiary System

Worldwide, correctional facilities have been recognized as a source of TB transmission to inmates, employees, and the community at large for decades. In Eastern Europe and Central Asia, the situation is made more serious by the existence of pools of infectious cases with drug-resistant forms of TB. Prisoners are not only more likely to become infected with the TB bacteria, but they are also less likely to be diagnosed with the disease, receive treatment once diagnosed, and have successful treatment outcomes even if they begin therapy. Furthermore, only 40% of patients diagnosed in prison actually complete their treatment if they are released from prison while still on therapy.

The Ministry of Corrections and Legal Assistance of Georgia and USAID, acting through the TPP, signed a Memorandum of Understanding to support efforts to strengthen TB control within the prison system to prevent the further spread of TB among the general population and reduce the number of all cases of TB in Georgia.

In line with the agreement to build capacity of health care professionals employed by the penitentiary system, the TPP trained FPs, nurses and TB specialists from all prisons across Georgia. In total, 29 FPs (72% of FPs working in prisons) and 47 general practice nurses (85% of GPNs working in prisons) attended training in early TB detection and management, and 19 TB specialists (100% of TB specialists in prisons) in the 3I's strategy. The project also supported the development of a stigma reduction campaign and provided communication materials, including calendars with photos of celebrities holding signs with messages showing their support for the fight against TB in Georgia and informational leaflets.

Strengthening Tools for Managing TB Patients

The GoG has prioritized the use of information technologies to streamline data systems, including those for TB. The TPP has assisted the National TB program in introducing innovative m/eHealth tools using mobile phones, tablets, and web-based learning systems to enable optimization of communication, sharing, and the exchange of information, images, and data among healthcare professionals and with patients wherever they are located.

To support implementation of the mHealth approach as broadly as possible, TPP collaborated with the USAID Health Systems Strengthening project to develop the TB health management information system (HMIS) as part of the national HMIS program. The system is composed of TB case registration, laboratory test results, and prescription, treatment monitoring, drug accounting and pharmacovigilance components. All indicators and data collection tools are aligned to the latest WHO standards. The TB HMIS module works by allowing providers to upload data to the national system quickly for each patient with TB or presumptive TB. The module can be accessed through computers or mobile devices such as smart phones and tablets. The Ministry of Labour, Health and Social Affairs will be using the module for generating case-based financial reports and simplifying billing and financial transactions through electronic reporting within the State TB Program.

To mark World TB Day in prisons,
Georgian celebrities were photographed
holding messages. Here, rugby player
Shalva Mamukashvili holds a sign that
says "We should win this fight against TB."



In addition to the main eTB database, the mhealth component also facilitates patient counseling using a tablet-based patient education module (which time- and geo-tags sessions) and allows electronic recording of patient attendance to directly observed therapy sessions (DOT) via SMS. After a successful pilot, a Government Decree has mandated electronic recording and reporting of TB related data from May 1, 2015 onward. Within the first quarter of implementation, more than 80% of TB providers countrywide started using the eTB module on a daily basis. There were about three thousand TB cases currently on treatment registered and daily DOT attendance reported for 92% of cases. Although this practice is rather recent, it has already proved to be well accepted by the beneficiaries.

The high level political commitment, donor support and private sector involvement have been critical factors in ensuring the countywide implementation of the new HMIS module and promoting its sustainability. This support was necessary to overcome the initial barriers such as low computer literacy and lack of access to the internet. With donor assistance, laptops were provided and TB specialists and nurses were trained with follow up on-site support for prolonged time as needed. MoLHSA accepted responsibility to take over the continued programmatic support of HMIS, including the TB module, to ensure seamless functioning of the system.

Strengthening Regulatory Framework for TB Control in Georgia

Considering the severity of the current TB epidemic, the public health threat that it poses, and the potential impact of ongoing changes to the National TB Response, the Government of Georgia has identified legal preparedness as a critical component in TB control. In February 2013, the Parliamentary Committee for Health and Social Issues decided to introduce effective policies aimed at strengthening the legislative framework for adequate TB control.

Since 2013, in what has been a crucial expression of political will, legislation has been introduced updating Georgia's response to communicable disease control as a whole. Based on this legislation, the committee hoped to adopt regulations that will apply key principles and provisions to TB control. Together, the legislation and regulations will serve to support and sustain a dedicated public health strategy for TB control. USAID Georgia TPP mobilized both local and international technical assistance to support the Parliament of Georgia in developing a national TB control bill. The project participated in the law-making process over the course of almost two years that included: an in-depth analysis of the current regulatory framework concerning TB control in the country, extensive stakeholder consultations, and several in-house debates on a draft bill. The parliamentary hearings on the TB control law were initiated in October 2015 and completed in December of 2015.

The new law takes the entire context of the country into consideration, including: its cultural and religious dimensions, social climate, educational level, financial resources, legal tradition and political philosophy. These country specific factors were analyzed and understood as contexts of basic human rights. The law respects all basic ethical principles that have been adopted by the international community and what is understood and accepted as fundamental social values.

The purpose of the Georgia TB Control Bill is to protect personal and public health through efficient control of tuberculosis, to prevent the spread of tuberculosis in Georgia, to establish a legal basis for management of TB cases, and to ensure adequate support for TB patients.

The bill outlines TB control principles, obligations of state for ensuring universal access to TB diagnostics, as well as guidelines for treatment and social care. Health care providers and regulatory agencies are to support applications of the highest TB care standards including timely diagnosis, effective treatment, and long-term follow up. Social assistance to TB patients through cash incentives is deemed as an integral component of the TB case management model.

The bill introduces involuntary isolation as an extreme measure to be used only in exceptional cases after all other options for infectious patient adherence to treatment have been exhausted.

The criteria and procedures for isolation are clearly outlined and remain in line with ethical principles to ensure protection of human rights and patient dignity. The draft bill also stipulates that TB case management should be implemented in line with best practice recommendations and international standards. This implies that there should be continued transition to outpatient management of TB cases. Full enactment of these new legislative provisions is planned to begin in 2017. The implementation of the TB control law will be closely monitored by international and local communities including civil society organizations and people affected by tuberculosis.

TPP's Small Grants Program

In 2012, the Tuberculosis Prevention Project initiated a small grants program for local non-governmental and civil society organizations (CSOs) to encourage their involvement in improving the quality of TB services and increasing the availability of and demand for TB Treatment. The TPP implemented eighteen small grant projects in four waves in collaboration with local CSOs. The absolute majority of these projects had countrywide coverage, promoted public awareness, and facilitated access to TB prevention, diagnosis and care for hard-to-reach groups at high risk, such as former prisoners, PLHIV, people who inject drugs (PWID) and other risk groups. The activities included training of 699 non-TB specialist health care workers, 73 TB nurses, 47 journalists, 129 school teachers, 77 peer educators, and 139 NGO representatives; development of TB quality improvement tools including: protocols, job-aids, manuals for infection control, counseling, etc.; arranging more than 20 TV talk shows; development and distribution of more than 100,000 copies of printed informational materials; awareness raising campaigns at more than 120 schools (including theological boarding schools) and 10 universities; and meetings and events involving more than 5,000 school children and 1,000 students, 200 NGO

representatives, 60 priests, as well as hard to reach population groups— monks and nuns, socially vulnerable groups, hundreds of former prisoners and their family members.

The TPP team has provided technical assistance to professional associations, faith-based organizations and NGOs participating in the small grants program to strengthen their capacity in designing and implementing community-level initiatives for TB prevention and control.

A competitive process was used to identify community based NGOs with the most feasible proposals aimed at preventing TB and decreasing stigma in their communities. After the announcement of the small grants program, a grant writing workshop was arranged for interested organizations. The TPP team provided comprehensive information, including priorities in TB prevention and relevant technical information useful for future proposal development. Information disseminated included: small grants program objectives, application guidelines, proposal development, and the selection process and evaluation criteria. Participants discussed different issues for concept papers in the TB field and exchanged experiences with each other.

The next stage was short-listing of applicants and pre-award meetings to provide background information on grantee and URC technical, monitoring, and financial responsibilities; review requirements for development of work plans and M&E indicators; review financial reporting tools; troubleshoot challenges; and provide a forum where the NGO partners could meet the project staff and other NGO grantees. As part of the pre-award process, the TPP team visited prospective grantees' offices to obtain information on their accounting systems and financial management capabilities.

During the implementation phase, TPP continued technical assistance to grantees in TB related institutional capacity building and trained them on TB related policy, financial management, and strategic and operational planning. URC incorporated mechanisms during the grant management process to ensure experiences are shared among NGOs.



As part of the collaboration with the Georgian Orthodox Church, information sessions and active case-finding were conducted at nunneries to support early TB detection among this hard-to-reach population

Grantee Spotlights

Collaboration with the Georgian Orthodox Church for TB Prevention

The Georgian Orthodox Church is widely respected throughout the country, as both an authority and a support system. Therefore, with support of the Center of Bioethics Studies and Culture (CBSC), TPP established a collaboration with the Georgian Orthodox Church to reduce community transmission of TB, to provide spiritual support to TB patients, as well access to TB services in monasteries.

These objectives have been achieved through increasing awareness among different target groups, specifically among: the clergy (bishops, priests) and parish, including the general population and socially vulnerable populations through an anti-stigma information campaign. The project also supported early TB detection among hard to-reach populations living in nunneries and monasteries by providing information on how to be supportive and promote active case findings among nuns and monks.

Additionally, a peer educators system was promoted as a way to identify treatment non adherence at the early stages and support patients to complete treatment. CBSC developed a comprehensive informational package and conducted a countywide advocacy, communication and social mobilization (ACSM) campaign with a focus on religious leaders and hard to reach groups such as monks, nuns, and parishioners, including former prisoners. These materials focused on disease transmission, importance of treatment adherence, supporting patients and decreasing stigma.

The project team conducted 49 meetings and medical examination sessions in monasteries. Due to their unique lifestyle, this group of people is one of the hardest to reach. In total, 766 monks and nuns have been examined, from which 41 were referred to health services as having symptoms presumptive of TB. Medical examinations for active case finding were also conducted in eparchies.

In total, 930 clerics and parishioners were examined during 14 sessions, from which 23 were referred to health services for presumptive TB. Forty-one meetings were conducted in eparchies, attended by 2,461 persons. In total, 95 persons (reverends and priests) were selected to be peer educators in their respective regions. They were trained to serve as a peer educator and support the implementation of project objectives. They will provide their parish with information sharing sessions at least once per month after the regular Sunday service. This approach will help to identify persons suspected to have TB as early as possible and refer them to the primary healthcare units for further medical examination. Because these religious leaders are well respected by the communities they serve, they are able to take an active role in educating them about the spread of TB, as well as about its treatment and prevention in order to diminish TB-related stigma. As they hold the trust of their parish, the behaviors they promote are more readily accepted. Demonstrated commitment of the religious peer educators and approval by the head of Georgian Orthodox Church will substantially promote sustainability of the project achievements. Videos reflecting the meetings can be found at <https://www.youtube.com/watch?v=jzxNaOiBOM0>

Community Level Information Campaign and Youth Awareness Raising Regarding TB in Georgia

As leaders in their schools and communities, teachers and students have great potential and are uniquely positioned to disseminate accurate TB information to their peers and families, dispel stigma and myths surrounding TB, and advocate for widespread TB control efforts in their communities. As part of broader school health initiatives, providing youth with TB information and screening services will help them make better, more informed decisions about their health and lead healthier lives.

Through its small grants program, TPP has supported local partner NGO the Georgia Health Promotion and Education Foundation (GHPEF) to implement a community level information and youth awareness raising campaign. The campaign was implemented countywide. The team has

Interest among students was extremely high, as they were enthusiastic to organize a variety of activities to further disseminate information among their peers and other parts of society.

designed and distributed more than 20,000 leaflets, 1,000 table calendars, 500 t-shirts with slogans, and 250 CDs. These CDs have been distributed among teachers and contain simple presentations and public service announcements on TB designed by the TPP project. In addition, the teachers were provided with methodological guidelines to equip them with effective tools for planning and implementation of information activities regarding TB in schools, ways of involving local administrations, media and other stakeholders. Some copies were also delivered to the trainers of Teachers Professional Development Center, who actively collaborated with the project and expressed readiness to continue organization of similar trainings for teachers in frame of their routine work.

GHPEF, in partnership with the Ministry of Education and the Teachers' Professional Development Center, organized training workshops for 129 teachers to improve their understanding of TB issues, provide them with correct information and dispel prevailing myths, and discuss possible future activities that can be conducted at their respective schools to mobilize against TB. Following the training workshops, informational seminars have been organized at 120 schools reaching more than 5000 students in different regions of Georgia and are ongoing.

Interest among students was extremely high, as they were enthusiastic to organize a variety of activities to further disseminate information among their peers and other parts

of society. Schools and universities have actively engaged in organizing 52 different follow up events/activities. These activities included peer education seminars, information meetings for parents, flash-mob actions, wall painting, street actions and distribution of information fliers, tree planting activities, intellectual games, sport tournaments, school conferences, etc. The total number of participating pupils exceeded 950 and 268 students participated in university actions.

Health NGO Coalition and Communities for Tuberculosis Prevention

Societal stigma is often the reason why TB patients in Georgia do not seek diagnosis or care and thus, educating patients and their family members, raising awareness of the communities in regards to TB-related issues, including stigma against TB-patients among family/community members and even medical personnel is of the utmost importance. The community outreach activities and preventive education are even more important in collective settings of internally displaced population (IDP) representing so called "bottlenecks" or "poverty pockets" in the country, which have higher risk of TB spread due to overcrowded living conditions, economic situation and higher stress levels.

The local CSO "Welfare Foundation," with six partners from White Band Coalition "Future without Poverty" established a thematic sub-group of the coalition devoted to TB prevention related issues including stigma and health rights of TB-patients. The sub-group implemented a small grant project to contribute to reducing prevalence and incidence of MDR-TB cases in Georgia. This objective was achieved through patient education to reduce the loss to follow up rate, improved TB care-seeking behavior through increased community awareness and an anti-stigma campaign, and strengthening of primary healthcare units in detecting and supporting TB treatment adherence.

The project team conducted qualitative research and an operational assessment of TB patient referral practice and Primary Care Providers specific needs in counseling for TB and presumptive TB patients. Based on the research findings, 6,000 copies of informational materials aimed at adherence support

The TPP Small Grant Program stimulated lots of interest and enthusiasm among school pupils for disseminating TB related information among peers



have been printed and distributed; 3,000 promotional materials aimed at reducing TB related stigma have been printed and distributed; 30 TB patient-peer educators have been trained; 21 PHC providers have been trained; 24 NGOs, community peer-educators, and media representatives have been trained and 10 community based ACSM events were implemented.

In addition to the agreed plan, the Welfare Foundation team, in collaboration with the National Center for Disease Control and Public Health, has developed a new informational brochure aimed at improving awareness of TB patient family members and close contacts as well as reducing TB related stigma.

ACSM activities were carried out in 10 locations of targeted regions (Tbilisi, Shida Kartli, Samegrelo and Adjara regions). The activities mainly covered the meetings with communities (beneficiaries of local NGOs) on TB prevention and anti-stigma issues, facilitated by a TB specialist and outdoor events accompanied by distribution of IEC materials. Success stories are linked to some follow-up activities: after the ACSM events, many NGOs have continued working on TB issues and planned meetings with their beneficiaries. The main purpose of these meetings is to raise awareness and reduce TB-related stigma.

Improving Early Detection of Presumptive TB Cases in Multi-profile Medical Facilities through Supporting Professional Development of Specialized Health Care Professionals

The Phthisiologists' and Pulmonologists' Association of Georgia (GPPA) has launched the project in response to several existing issues related to early case detection of Tuberculosis, including referral of a significant number of presumptive TB patients to different specialists due to the diversity of clinical symptoms and signs. Also, TB in children is often missed or overlooked due to non-specific clinical manifestations and difficulties in diagnosis. Before reaching the TB specialized network, children with TB as well as adults with extra-pulmonary TB often present at separate pediatric services at different levels of the health system where there is a lack of guidance on how to address the challenges of diagnosing and managing childhood TB.

SMALL GRANTS PROGRAM

The small grants program, implemented as part of USAID Georgia Tuberculosis Prevention Project, is the first time a wide-scale effort was made to stimulate civil society representatives, and encouraging them to use their competitive advantage of flexible, grass-roots organizations to expand TB prevention and care beyond health care facilities. The program has demonstrated that civil society organizations (CSOs) have strong motivations to serve their communities, especially vulnerable populations. These CSOs have also realized, however, that their potential is directly dependent on the capacity and availability of resources. Technical assistance and funding provided by TPP enabled CSOs to develop and implement innovative and sustainable strategies that in the end facilitated a stronger response to TB awareness, prevention and care.

The major goal of the project was to improve early detection of presumptive pulmonary and extra-pulmonary TB cases in the public-private sector, including multi-profile medical facilities. Specific focus was made on extra-pulmonary forms, childhood TB and TB in patients with diabetes. The Association developed seven job-aids and four protocols on detection and management of presumptive TB cases in childhood, in pregnancy, in patients with diabetes, etc., and trained 394 frontline health care professionals of borderline specialties in modern aspects of TB diagnosis and differential diagnosis. In addition, to provide a flexible basis for establishing strong linkages between the TB program and the public-private sector and make further communications and referral of patients more effective, GPPA developed a special patient referral flyer. The flyer provides information regarding free of charge services that are provided within the TB program once a patient is evaluated as presumptive for TB and a detailed contact info of the TB referral units. The flyer was launched for use in July 2013 within employment sites of the

trained professionals and the National Center for TB and Lung Diseases' doctors have received patients with the flyers. In three years, the project activities led to a 31% increase in referral of presumptive TB patients from multi-profile facilities.

Support of TB-service Nurses to Strengthen the Quality of TB Services in Georgia

TB service nurses (DOT-Nurses) are playing a central role in implementing standardized and directly observed drug therapy and an efficient recording and reporting system with assessment of treatment results. Therefore, a small grant program was awarded to the Georgia Nurses Association to strengthen the quality of TB services in Georgia by increasing the professionalization of nurses. The project accomplished four objectives: a TB nurse job description was developed based on the initial assessment of the work environment and roles and responsibilities of nurses, 10 protocols and seven quality standards were developed, printed and distributed to professionals, and 83 nurses were trained in the Adjara, Kakheti, Imereti and Samegrelo regions. The GNA organized the closing conference to share the project achievements with its members and other stakeholders including MoLHSA, NCDC, and NCTBLD.

Ensuring Adherence to Tuberculosis Treatment Among Former Prisoners

Over the last decade, TB cases had decreased in the civil sector. Conversely prisons have been characterized by the opposite trend and for several years TB has remained among the critical indicators of illness and death among the prison population. The major challenge has been integration of prisoners on TB treatment into civil TB treatment programs after release and adherence to the treatment course. In general, about 20% of released TB patients were not followed and fell out of the TB treatment programs. It was clear that there was a gap to be filled in regards to treatment adherence control among former prisoners.

TPP awarded a small grant to Center for Information and Counseling on Reproductive Health—Tanadgoma, an NGO with well documented track record of work with high-risk groups such as prisoners, MSM, SW and IDU.

The major goal of the project was to improve early detection of presumptive pulmonary and extra-pulmonary TB cases in the public-private sector, including multi-profile medical facilities.

The project covered four geographical areas of Georgia: Tbilisi (Kartli region), Batumi (Adjara region), Kutaisi (Imereti region) and Zugdidi (Samegrelo region) and was targeted at prisoners, former prisoners and their families. The main objectives were to support treatment adherence among prisoners and former prisoner TB patients who are under treatment at the moment of release from prison and raise awareness of high risk groups for developing TB. To achieve these objectives, Tanadgoma developed a pre-release package including a guide for TB counseling in prison, TB client map and counseling consent form. In addition, Tanadgoma trained 43 social workers, and 60 medical personnel (103 participants in total) working in the TB institution and in other prisons. The training included two-days of presentations and interactive sessions with the focus on TB treatment adherence issues and specifics of work with prisoners. As a result of training, knowledge improved by 26% among former prisoners and by 39% among their family members.

An informational booklet called "Tuberculosis and treatment adherence" was developed, 2,000 copies printed, and distributed to prisoners and their families. Booklets were also handed over to the Medical Department of the Ministry of Corrections for distribution among prisoners on TB treatment. In addition, 23 educational meetings were conducted with family members of former prisoners who are under TB treatment or defaulted from treatment, reaching 276 family members. Individual meetings

were held with former prisoners, reaching 311 former prisoners. At the end of the project, a roundtable was carried out to present project achievements and analysis of data collected during the project implementation.

Strengthening Linkages Between HIV and TB Services Among Key Populations (Drug Users, Men Who Have Sex With Men, and Sex Workers)

Worldwide there has been insufficient inclusion of collaborative TB/HIV activities in TB and HIV grants and this limits the impact of the programs on the burden of disease in people living with HIV and TB. The purpose of joint TB and HIV programming is to maximize the impact of investments for better health outcomes. It allows for better targeting of resources and harmonization of efforts, including for cross-cutting areas such as health and community systems strengthening to scale up TB and HIV services and to increase their effectiveness and efficiency, quality and sustainability.

The project "Supporting collaborative TB/HIV activities in Georgia" has specifically targeted key populations: drugs users, Men who have sex with men (MSM), and sex workers (SW) using two approaches: a) providing space and resources for TB-related awareness raising among target groups through Information, Education, Communication (IEC) methodology and b) improving existing TB services for target groups through sensitization of the TB facilities' personnel towards key populations and providing recommendations on improvements of the referral system among HIV and TB programs.

The Center for Information and Counseling on Reproductive Health—Tanadgoma developed a brochure on tuberculosis for project beneficiaries (MSM, SW, PUD). Additionally, stories of TB patients were collected, recorded and corrected for the booklet "Patients' stories". Both brochures were printed in 2,500 copies and distributed among beneficiaries.

There were 755 counseling sessions were conducted with project beneficiaries at the three project implementation sites in Tbilisi, Batumi, Kutaisi. The meetings led to identification

of 59 presumptive TB cases that were recommended to visit TB care services. The Tanadgoma team also arranged 60 counseling sessions to reach out to 351 injection drug users. Twelve presumptive TB cases had been identified among them and advised to address health services. The implementers conducted 24 training sessions for peer educators at the three sites in Tbilisi, Batumi and Kutaisi. Six trainings were conducted in each target group. In total 240 beneficiaries participated in this training.

To evaluate the project outcomes, Tanadgoma conducted the survey at the beginning and at the end of the project implementation to measure progress. Ninety respondents from target groups (MSM, SWs, PUDs) participated in the survey. In total 180 questionnaires were filled out. The survey demonstrated significant progress in the respondents' knowledge and changes in attitude.

Improving TB Control by Removing Health System Barriers

As evidence suggests, weak health systems pose many barriers to effective TB control. It is therefore vital that new service delivery models are assessed, and system barriers effecting TB control program identified and at least minimized. Accordingly, the NGO Partnership for Social Initiatives has developed a small grant program with a specific focus on the health system. The purpose of this grant program was to build and strengthen linkages between health care facilities providing TB care and communities through active outreach by demonstrating how to enhance the effectiveness and efficiency of TB control by removing Georgia's private health system barriers and to demonstrate a new long-term equitable and sustainable model for TB control. The project team conducted a survey on barriers to integration of TB services into the general health care system. More specifically, the survey aimed to identify how the governance, service organization, and procedures (including the type and level of service organization), financing, and provider-payment mechanisms practiced in the private health system models create incentives and barriers that affect the delivery of quality TB service.

In order to improve populations' awareness and increase demand for TB services, the project formed a community coalition (CC) composed of community based organizations in Kakheti region and started a door-to-door education campaign in Lagodekhi. Nine consultants/educators conducted 1,350 consultations; in total, the consultants visited 2,250 households. During the consultations, the CC member mini interview guide was used. Pamphlets were distributed by coalition members during door-to-door visits as well as delivered to other community centers,

schools, pharmacy stores and other places within Lagodekhi district. Up to 20,000 pamphlets were distributed in total.

In collaboration with TPP, the project team developed training/ presentation materials and conducted training for teachers and schoolchildren at two public schools. Key messages regarding tuberculosis signs and symptoms, diagnostics and TB treatment adherence were emphasized. Animations were also included for better perception.

STRENGTHENING THE QUALITY OF FULL IMPLEMENTATION OF DOTS AND DOTS PLUS

Technical assistance provided to Country Coordinating Mechanism (CCM)/Ministry of Labor, Health and Social Affairs (MoLHSA)/NCDC to support preparation of the National TB Strategy and Global Fund Concept Note for TB program funding in 2016-2018

TPP was actively involved in the development of the TB control law, which was adopted by the Parliament of Georgia in December 2015

844 primary care sites were visited for performance appraisal and mentoring of **1,663** trained general practitioners

TB Management Guidelines and protocols for adults and children were developed, printed, and disseminated to TB specialists and other audiences

TB HMIS module and TB mHealth application were developed and implemented countrywide

18 small grants awarded within the project implemented by local NGOs and professional associations

126 TB specialists and 53 nurses trained in detection and management of mental disorders among TB patients

63 TB specialists trained in new MDR TB treatment schemes to support Bedaquiline implementation

In collaboration with USAID SIAPS, TPP supported training of a core group of TB specialists in management of MDR TB treatment side effects related to new drugs including Bedaquiline

11 Xpert MTB/RIF Systems installed and **21** laboratory technicians trained

Strengthening Capacity in Tuberculosis Control at the Community Level

The project aimed to increase knowledge and understanding of public health aspects of TB among the personnel of district public health centers; strengthen capacity of public health centers' personnel in contact tracing and screening of high risk patients; strengthen capacity of public health centers in supervision of TB interventions at the community level; strengthen capacity of public health centers' personnel in counseling and community education on TB issues; and strengthen capacity of public health center's personnel in monitoring and evaluation of TB interventions at the district/ community level.

The activities carried out within the frames of this project improved the understanding and confidence of PHC personnel in public health aspects of TB. In total, 182 individuals representing all 63 public health centers (and departments) throughout Georgia were trained on TB control at the community level. Evidence-based guiding materials including a TB control manual for PHCs were developed, and WHO and US/CDC recommendations and guidelines were printed and distributed among training participants. The TB control manual will serve as a reference book for the district PH centers and will be a useful tool for PH system players to effectively implement and monitor TB control activities. As a result of project implementation, overall knowledge on public health aspects of TB was increased by 30% on average among PHC personnel participating in the trainings.

Providing Assistance to Recently Established Private Treatment Sites to Meet TB Best Standards and Improve Infection Control

The systemic changes to the delivery of TB and MDR-TB services posed considerable challenges to managers of private facilities, health providers, and patients. A mapping exercise conducted jointly by MoLHSA and USAID TB revealed that

IMPLEMENTING *FAST* IN GENERAL HEALTH CARE SETTINGS

- ◆ Two GeneXpert machines were installed at general hospitals for active screening of all patients with cough
- ◆ 44 cases (14%) out of 318 patients tested over the five-month period were found with TB, 10 cases were confirmed with MTB-positive and Rifampicin resistance

the private clinics were ill prepared to accommodate specific needs of TB patients. Lack of ventilation systems to ensure adequate airflow was identified as a major problem. The TPP, in collaboration with MoLHSA, selected 30 clinics in severe need of ventilation systems. Exhaust ventilation equipment was installed at these facilities and the staff was trained in adequate utilization and maintenance of the ventilation equipment in order to meet infection control requirements. All works were performed in line with USAID environmental compliance regulations and procedures. Some private clinics used TPP ventilation standards and installed similar systems in their facilities, which were under construction last year and therefore not included in the TPP coverage.

TPP worked with local partners such as the Health Research Union to prevent healthcare associated transmission of TB, reduce TB incidence among high-risk patients, HCWs and communities through improved infection control (IC) and prevention practices at district hospitals. This includes strengthening the capacity of district hospital centers in TB-IC through implementation of targeted and tailored infection control interventions. The project assisted hospital infection control committees in the development and implementation of TB-IC action plans, costing infection control interventions, and supporting implementation of TB-IC measures, including introduction and implementation of administrative,

environmental and personal protective measures. The project assisted the hospital administration in the development and implementation of patient pathways based on FAST and PAL principles, the implementation of patient referral protocols, and the development of monitoring and evaluation systems for TB-IC activities, including measurable indicators and supporting the development of evidence to support nation-wide implementation and follow-up.

TPP purchased two GeneXpert machines to pilot the FAST (Find Actively, Separate and Treat) approach at two general hospitals and transferred that to NCDC on the basis of a memorandum to ensure sustainability of the effort. The machines were installed in "New Hospital," Tbilisi and Central Clinic, Rustavi and laboratory technicians were trained. In collaboration with HRU, a FAST protocol for general healthcare settings was developed, printed and distributed at these hospitals. Three training sessions were arranged (two in Tbilisi and one in Rustavi) for 75 physicians and nurses. The trainings covered FAST principles and raised awareness of the opportunities created by the on-site availability of GeneXpert machines for rapid identification of unsuspected infectious TB cases. "New Hospitals" and Rustavi General Hospital started usage of GeneXpert machines to pilot the FAST approach. Lab technicians of "New Hospitals" and Rustavi Central Clinic were retrained to improve quality of TB diagnosis and ensure timely initiation of adequate treatment for

TPP selected 30 clinics in severe need of ventilation systems.

Exhaust ventilation equipment was installed at these facilities and the staff was trained in adequate utilization and maintenance of the ventilation equipment in order to meet infection control requirements

all confirmed TB cases. Any patients presumptive of pulmonary or extrapulmonary TB were screened according to the FAST protocol. In total, 510 patients were tested at both sites among which 72 cases were confirmed with TB including 12 Rifampicin resistant (R/R) forms. This pilot will inform the country decision on further roll out of rapid diagnostic technologies for early TB detection in general health care settings.

PROVIDING LIMITED ASSISTANCE TO RECENTLY ESTABLISHED PRIVATE TREATMENT SITES NATIONWIDE

Ventilation systems installed in **30** facilities

Infection control curriculum, handbook and costing tool developed and **165** district hospital managers and epidemiologists trained in TB infection control

2 Xpert MTB/RIF systems procured and transferred to NCDCPH to support implementation of FAST strategy at two private general hospitals, where **510** patients were screened and TB was detected in **72** patients, including **12** R/R cases

NOTABLE ACCOMPLISHMENTS



1,277 Family Physicians



1,298 Nurses

trained on early detection, diagnosis, and treatment



21 Lab Technicians

trained on use of Xpert MTB/RIF Systems



Ventilation systems installed in
30 facilities



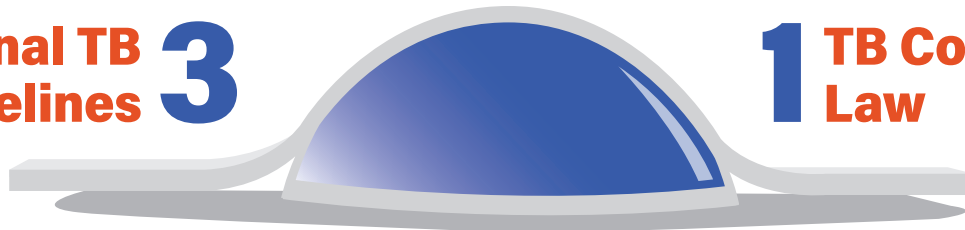
11 communication campaigns

implemented to mark World TB Day and improve awareness regarding childhood TB

18 small grants
awarded and implemented by local NGOs



National TB Guidelines 3



1 TB Control Law



To mark World TB day in schools, the TPP team coordinated tree planting events with classes of school children

RESULTS

Due to joint efforts of national and international partners, Georgia has made a significant progress in fight against TB. Since 2012, the incidence and prevalence rates of TB in Georgia steadily declined. This decline is not attributable to missing patients as the investigation of presumptive cases has increased from 15,240 cases in 2012 to 17,825 cases in 2015.

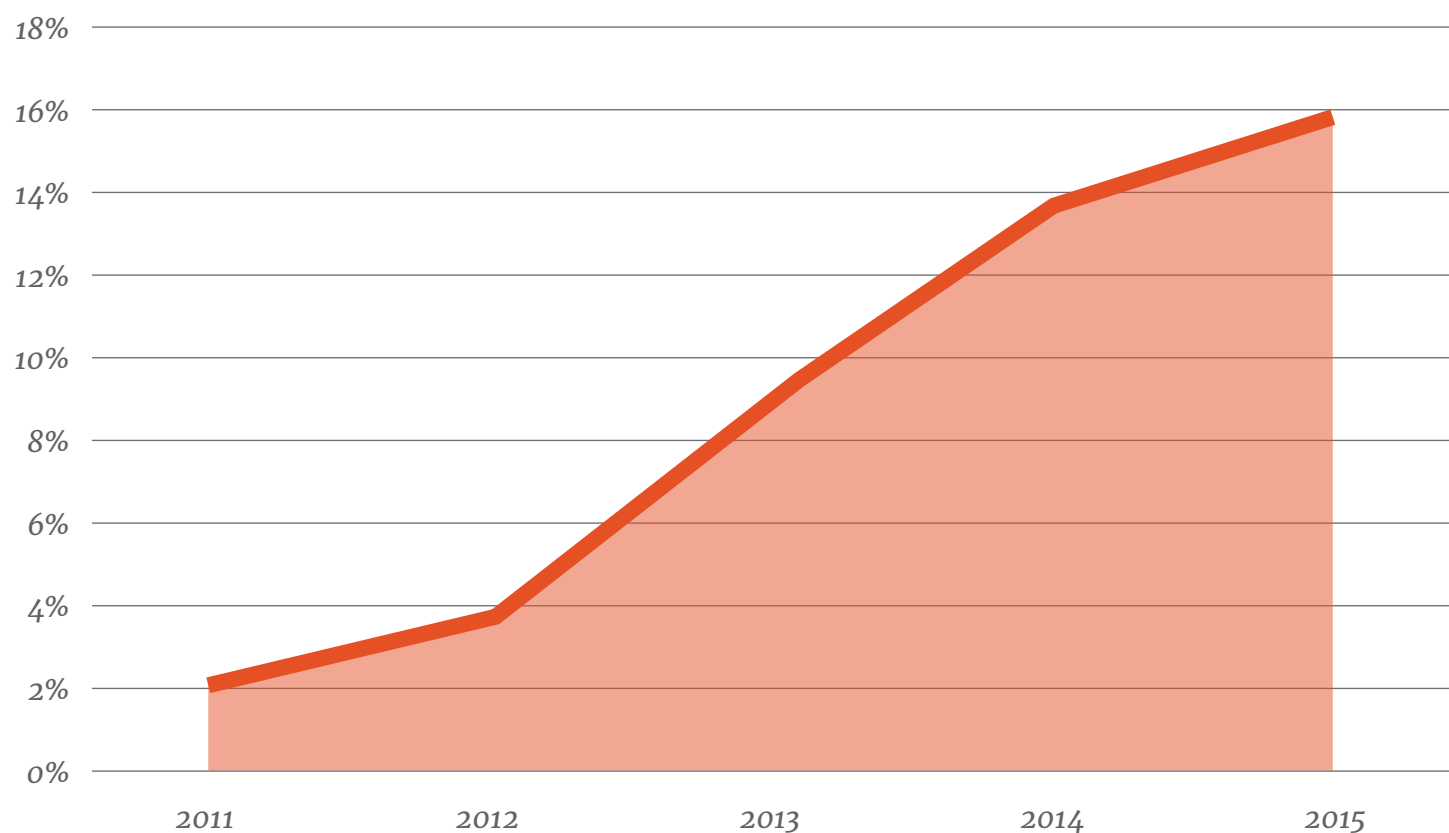
Although the total number of both sensitive and resistant TB cases has decreased, an increase was observed in the proportion of MDR TB cases among both new and retreatment TB cases.

GEORGIA TB PROFILE

Indicator	2011	2012	2013	2014	2015
TB incidence rate (per 100,000 population)	125	116	116	106	—
TB cases notified	5,536	4,974	4,319	3,850	3,611
Case detection all forms	84%	78%	68%	75%	—
TB mortality rate (per 100,000 population)	3.7	4.5	7.2	6.6	—
Treatment success rate	76%	76%	85%	80%	—
TB cases with MDR TB (new)	11%	9.2%	11%	12%	12%
TB cases with MDR TB (retreatment)	32%	31%	38%	39%	38.8%
MDR TB cases	760	630	710	640	—
Patients started in MDR treatment	741	665	526	501	466
MDR treatment success rate	54%	52%	50%	46%	41%
HIV-positive TB patients	1.9%	2%	2%	2%	3%
HIV-positive TB patients on ART and CPT	—	79%	89%	98%	—
National TB program budget (USD)	\$9.5M	\$10M	\$13M	\$17M	—

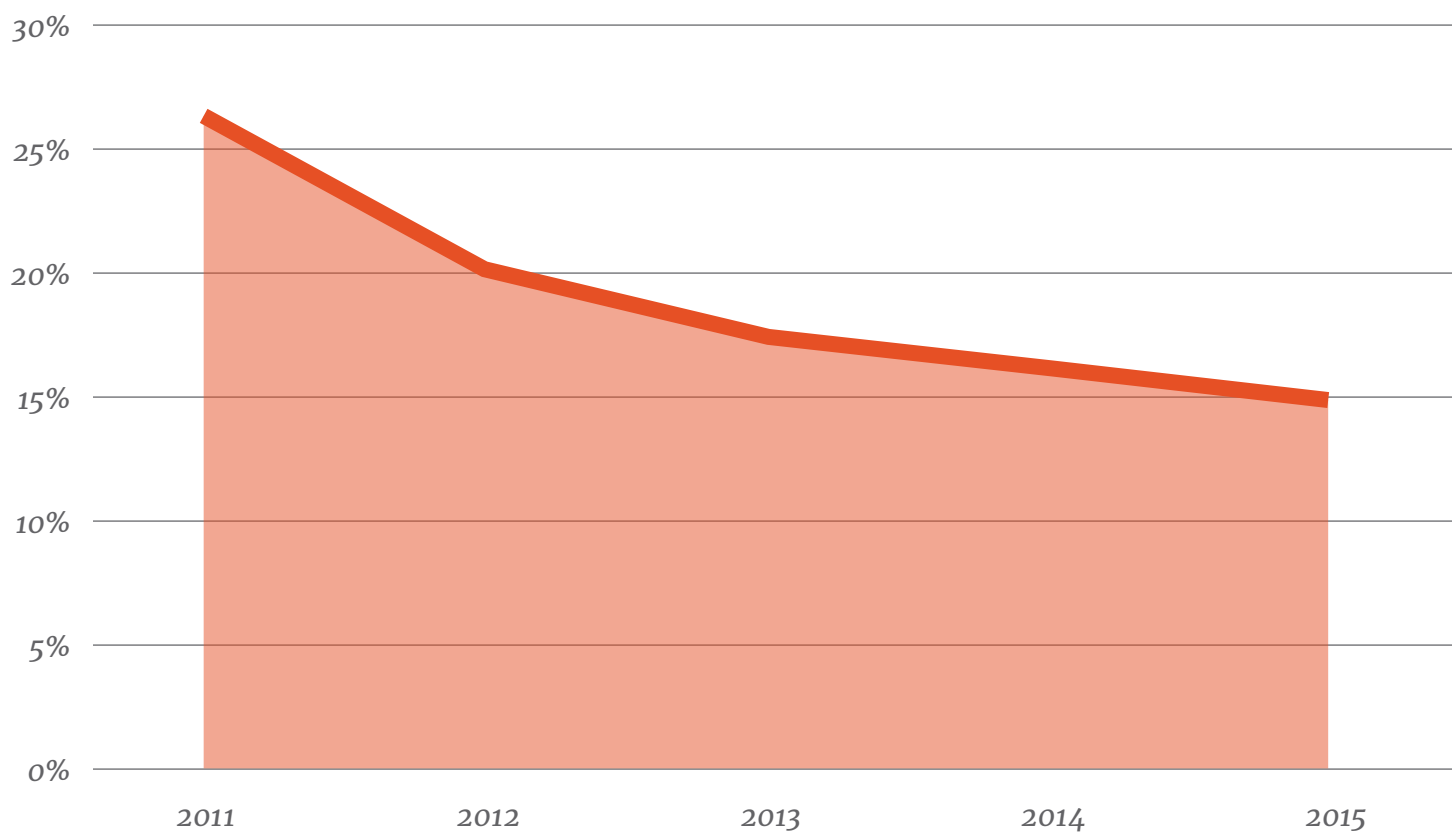
Note: 2011-2014 data are taken from corresponding WHO Global TB Reports, available data for 2015 derive from the NTP database

PROPORTION OF PRESUMPTIVE TB PATIENTS REFERRED FROM PHC LEVEL TO TB SERVICES



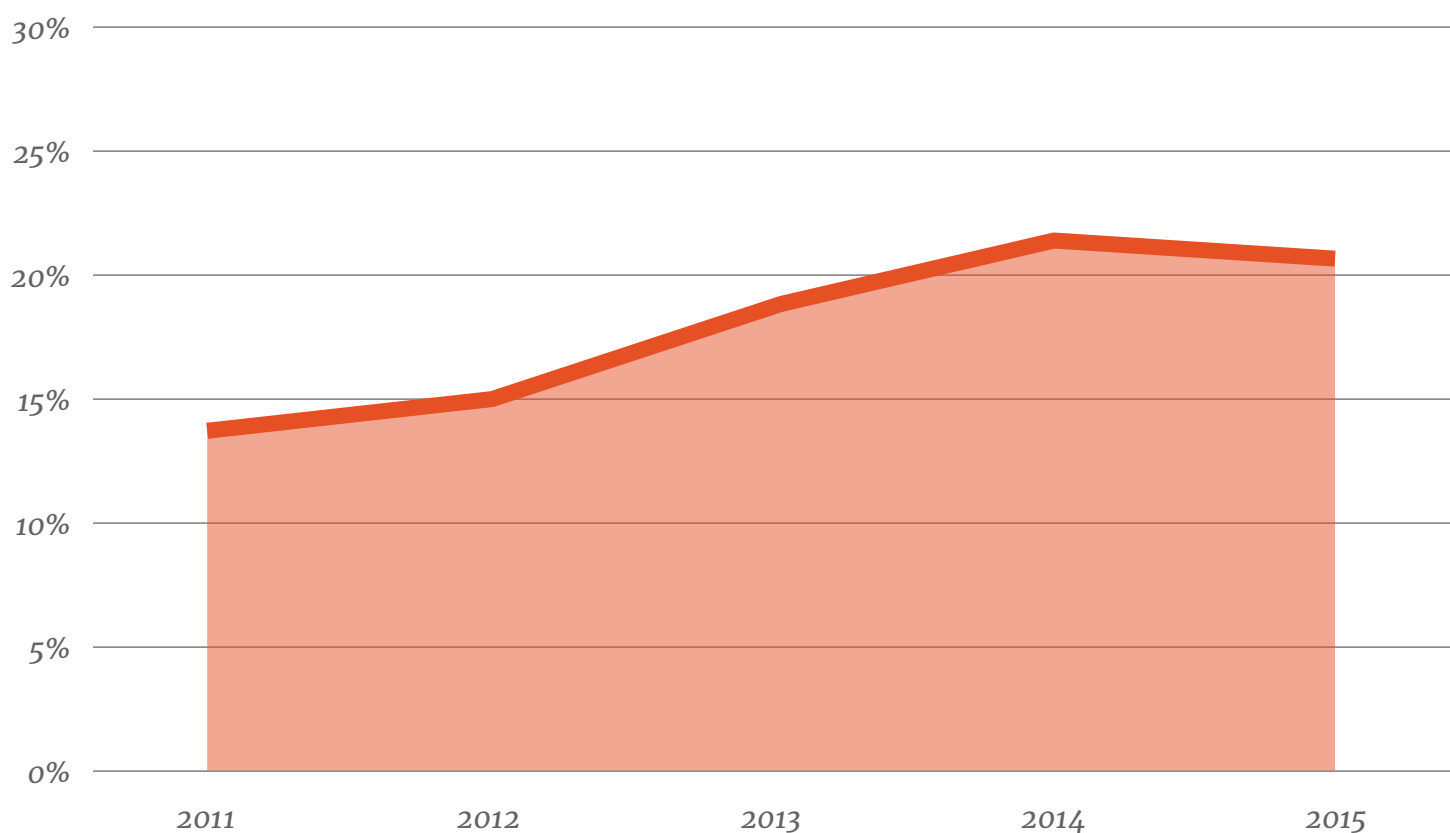
TPP interventions were directed at intensifying TB case detection efforts. Capacity building of primary care providers led to an increase in the referral rate of patients with presumptive TB from 2% in 2011 to 16% in 2015.

PROPORTION OF CONFIRMED TB CASES AMONG THOSE WITH PRESUMPTIVE TB



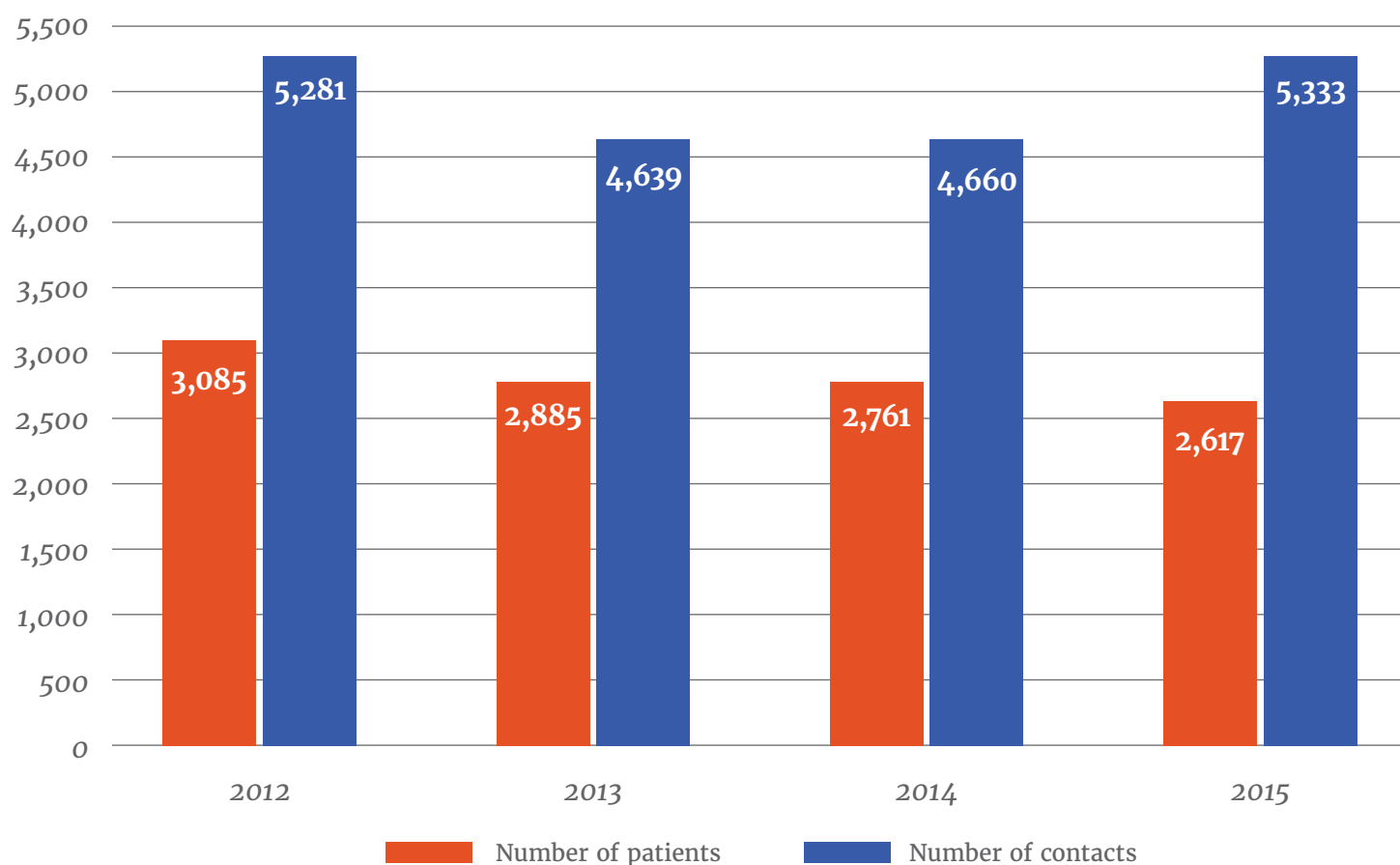
Early referral resulted in a decrease in the proportion of confirmed cases among those with presumptive TB from 27% in 2012 to 15% in 2015.

PROPORTION OF PATIENTS WHO RECEIVE DOT AT PHC LEVEL



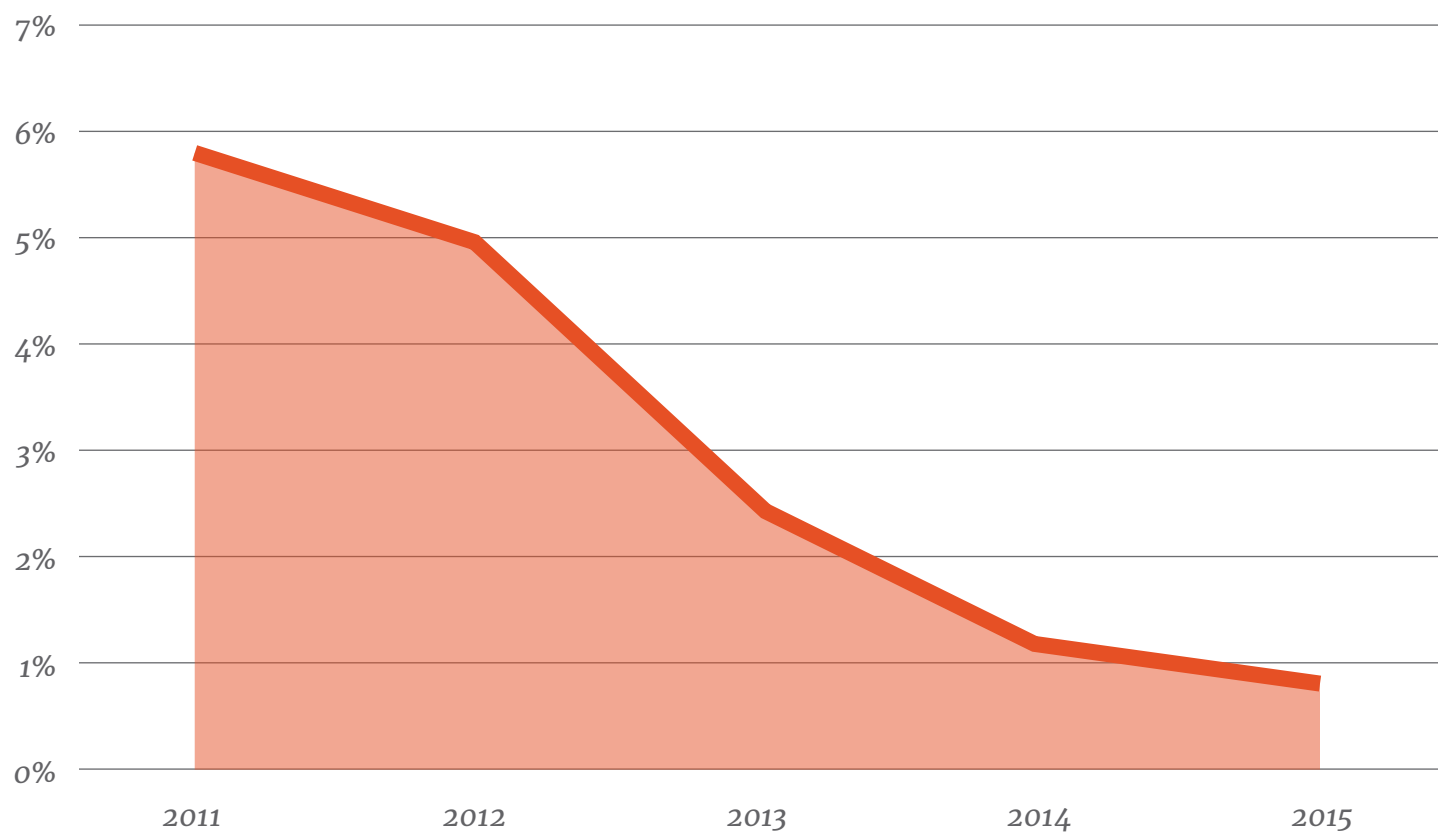
PHC involvement in the treatment stage of TB care also increased. The overall share of TB patients who received DOT at the PHC level has steadily increased from 13% in 2012 to 20% in 2015. The proportion of community level DOT became especially marked in rural areas.

NUMBER OF PATIENTS WITH CONFIRMED TB DIAGNOSIS AND THEIR CONTACTS SCREENED FOR TB/MDR-TB



Capacity building and support provided to epidemiologists who are responsible for contact tracing led to an increase in the number of investigated contacts per newly diagnosed TB patient. At the beginning of the project, in January 2012, the number of contacts investigated per patient with confirmed TB diagnosis was 1.7. By 2015, the annual average exceeded two contacts per patient.

PROPORTION OF CONFIRMED TB CASES AMONG CONTACTS



The proportion of confirmed cases among contacts was reduced from 5% in 2012 to 0.83% in 2015, indicating that most presumptive TB cases were sent to TB specialists at an earlier stage.

SUSTAINABILITY

Since the inception, URC has employed effective and evidence-based approaches to maximize project impact and sustain the results. The TPP team's approach to all activities under the project was to provide a supportive role to partners at national and regional levels. The TPP implementation plan has been designed to avoid a general "one size fits all" approach to developing TB control systems, and was firmly built on the national objectives within the national health framework. The activities and priorities have been developed and implemented with significant input from local Georgian TB implementers, MoLHSA, NTP, CCM, NCDC, PR of GF Grants, professional associations, NGOs and educational institutions. Technical assistance provided by the TPP experts during the project lifecycle to MoLHSA/NTP has been substantial and quite diverse covering a wide array of TB related policies, programmatic and clinical topics. The project has been very flexible in responding to the emerging needs of the National TB Program. With this support, the NTP could closely follow all innovations and updated recommendations from the WHO and other credible international bodies. TPP technical assistance has resulted in developing clinical practice guidelines, operational manuals for clinical personnel and national strategies which are all essential for the National TB Program.

Following reorganization in 2012, the structure, accountability lines and processes related to NTP governance and management had not been fully redefined. In these circumstances, TPP had to address gaps and uncertainties related to roles distribution among different actors and accomplish various tasks which otherwise would be the responsibility of a functional NTP central unit. In November 2014, the MoLHSA established the Central TB Coordination Council which should oversee and provide policy guidance

MAJOR TECHNICAL DELIVERABLES DEVELOPED WITH TPP INPUT

- ◆ The TB Control law was adopted by the Government of Georgia on December 23, 2015
- ◆ National Guideline for TB Management, Tbilisi, 2013; Approved by the Ministerial decree N 01-131/O; June 22, 2013
- ◆ National Guideline for TB Management, Tbilisi, 2015; Updated Version; Approved by the Ministerial decree N 01-280/O; September 21, 2015
- ◆ National Guideline for Pediatric TB Management, Tbilisi, 2014; Approved by the Ministerial decree N 01-116/O; May 19, 2014
- ◆ Electronic reporting in eTB module is mandated by the Governmental order #150 as of April 3 2015
- ◆ Four training programs on TB detection and management were accredited by the National Continuous Professional development Council of MoLHSA and will be implemented by GPPA and GFMA in the future

for adequate TB control. The level of operational support that would be required to make the body fully functional and if the Department of Health of MoLHSA would have enough capacity to serve as an executive arm for this council has yet to be defined. The issue of NTP central governance is of high



Youth in Zugdidi joined the World TB Day Campaign

importance and will be addressed by the post-2015 TB strategy for Georgia. The same strategy contains a detailed technical assistance plan and identifies potential funding sources as TPP support will no longer be available starting in July 2016.

Georgia still heavily relies on Global Fund financing for maintaining critical TB control functions including provision of first and second line TB drugs, laboratory consumables, and patient incentives. USAID support through the Georgia TPP has been devoted to strengthening health systems capacity for an effective TB response, building quality improvement structures at a facility level, improving awareness and reducing TB related stigma and introducing up-to-date, evidence-based tools and approaches for promoting patient-centered TB care. TPP has been a reliable resource partner for all local and international actors involved in the national TB response in Georgia. It has not yet been decided what would be a funding source for areas covered by the TPP since 2011.

As Global Fund allocations to Georgia will be dramatically reduced within the new funding model, a substantial increase of domestic funding will be required to ensure universal access to TB treatment and diagnosis, including drugs and consumables. Funding stability for other important interventions that are vital for quality delivery of TB services remains questionable. The importance of continued financing for supporting the interventions described in this report should be comprehensively discussed by national stakeholders and adequately reflected into the transition plan, currently under development, aimed at ensuring sustainability of TB and HIV national responses.

In order to cover the gaps in major directions not funded domestically but supported by the US Government, the Ministry and CCM have decided to include many of the activities supported by the TPP into the new Global Fund TB grant. This includes: continuous capacity building for FPs and nurses, technical support for transition planning, implementation support for introducing new drugs and rapid diagnostic technologies, and updating guidelines and implementation support.

RECOMMENDATIONS

Georgia has recently adopted its TB Strategy for 2016-2020 which is in line with the Global End TB Strategy and sets very ambitious targets to be met by 2030. TPP has achieved all its objectives, however Georgia still has a long way to go before eliminating the TB epidemic. Despite vigorous efforts MDR-TB burden remains significant and treatment success rate is still less than desirable. In order to continue making progress in TB prevention and treatment, the country needs to increase the ability of service providers to identify TB cases missed by the health system. It also needs to secure universal access to services, both by increasing the role of the private sector and by reaching more vulnerable populations. Specific focus should be made on supporting patient centered approaches in TB care through NGO involvement and community activities and improving the health services' performance.

Recommendations for the Government of Georgia

The Global End TB Strategy calls for a paradigm shift to end the TB epidemic. TPP has built a strong foundation for the country to change the course of actions and move from controlling TB to ending the TB epidemic. A paradigm shift to end TB can be effectively achieved through the following actions:

1. **Know your epidemic and know your response:**

Innovative e/m-Health tools and approaches introduced by TPP hold great potential for improving transparency, accountability and governance of the National TB Program. The patient-based, multifunctional TB electronic HMIS, once fully implemented, will significantly improve the availability of information on critical clinical and programmatic indicators and allow for quick and evidence-based decision making for the benefit of patient. The Government of Georgia should

consider providing extensive implementation support to the eTB module to ensure close monitoring on ongoing TB program tendencies and dynamics.

2. Assess needs across all dimensions: The Government of Georgia should consider implementing operational surveys on a regular basis to generate evidence for informed decision-making on comprehensive strategies to address all needs across the continuum of care.

3. **Rethink DOT (Directly Observed Treatment)**

Strategy: An alarmingly high loss to follow up rate of MDR TB patients call for immediate action to improve provision of DOT. Approaches to DOT implementation should be revisited for ensuring patient centeredness, building a trust-based relationship, providing social and psychological support. Adequate resources should be allocated within the State funded health programs for incentivization and greater involvement of primary care providers in TB detection and long-term care.

4. **Introduce technology solutions to TB control challenges:**

The National TB Program should pilot technology solutions aimed at eliminating geographic access barriers and improving treatment adherence. Every action should be taken to continuously support introduction of new drugs and diagnostic technologies for improving M/XDR TB treatment outcomes.

5. **Plan for sustainability from the beginning:**

A smooth transition from donor to domestic funding can only be achieved through effective sustainability planning, strengthening governance structures and mechanisms, establishing broader partnerships, and improving transparency and civil society engagement. Technical and

operational support needs to be provided to the CCM and the National TB Coordination Council to guide the stakeholders through this transition and enable the country to achieve post 2015 strategy targets.

Recommendations for USAID

1. Assist Georgia to meet EU-Georgia Association requirements in health:

The increasingly high burden of MDR TB in Georgia poses a significant threat and burden not only the national but also the European system of public health. For the last five years, it has been well documented that tens of Georgian citizens with the most dangerous forms of TB left the country to seek medical assistance in France and other Western European countries. Article 356 of the EU-Georgia Association Agreement issued in June 2014 stipulates the commitment of Georgia to strengthen “epidemiological surveillance and control of communicable diseases, such as for example HIV/AIDS, viral hepatitis, tuberculosis as well as antimicrobial resistance, as well as increased preparedness for public health threats and emergencies.” USAID assistance for the last decade has been critical for building health systems and developing TB control mechanisms. Considering the complexity of TB related challenges and its devastating societal and economic consequences for the country, region and the global community, USAID should consider continuing its assistance to GoG to raise public health safety and protection of human health as an essential component for sustainable development and economic growth.

2. Maintain its presence in the health care arena to facilitate systemic reforms for sustainable and effective response to public health threats:

USAID should consider maintaining its involvement in setting and implementing the public health security agenda in Georgia. MDR TB being a major public health threat in Georgia can only be addressed through evidence-based and well planned interventions. The National TB program is not free of competing interests. The TPP team, acting as a neutral entity, has been able to balance these interests through offering evidence-based solutions to emerging problems,

facilitating professional linkages and leading the dialogue between various institutions including high-level decision making entities e.g. MoLHSA and the Parliament of Georgia. Involvement of the US government in TB control was viewed as an expression of high level political will to support TB control that in turn stimulated high level commitment from the GoG. The presence and involvement of a USAID-supported project in national TB control has given high credibility to all ongoing developments.

Georgia is currently going through the complex transition from international to domestic funding for TB and HIV programs. The capacity of state institutions to address technical needs related to planning, budgeting, necessary regulatory arrangements etc. is extremely limited. In these circumstances, availability of the technical support team on a long-term basis may help to address many gaps, including the needs related to implementing the new TB control law.

3. Share TPP implementation experience to the global community:

To improve the transfer of knowledge and experience among countries, the WHO Regional Office for Europe has collected and disseminated good examples of prevention, control and care of TB in the region. The compendium provides 45 examples of good practices in addressing TB and drug-resistant TB from 21 countries, two of which are success stories from URC’s USAID TPP in Georgia. USAID should consider sharing TPP experience in countries with high MDR TB burden. Georgia is the first country in the region to receive bedaquiline from the USAID Donation Program. USAID support enabled the NTP to make the new treatment regimen widely available to all M/XDR TB patients eligible for bedaquiline treatment. Early results of the bedaquiline implementation experience should be evaluated and shared to the global TB community to promote its safe and effective use by more beneficiaries.

URC acknowledges guidance and support provided by the USAID throughout the project implementation. We extend our thanks to the Ministry of Labor, Health and Social Affairs, National Center for Disease Control and Public Health, National Center for Tuberculosis and Lung Disease and all national partners for their continuous contribution and tremendous input in meeting the project objectives. Special thanks go to the Georgian Orthodox Church for giving us the opportunity to reach out the church community. We are grateful to Georgia TB Coalition and Patients Union for innovative approaches and hard work for strengthening community-based tuberculosis care.



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